CLAIMS

What is claimed is:

1.   A method for compressing data for transmission using asynchronous transfer mode (ATM), the data including a plurality of segments, each of the plurality of segments including a first end and a second end, the method comprising the steps of:

     (a)   representing the first end of a segment of the plurality of segments with a partition compression code word;

     (b)   compressing a remaining portion of the segment.

2.   The method of claim 1 further comprising the step of:

     (c)   repeating steps (a) and (b) for each of a remaining portion of the plurality of segments.

3.   The method of claim 1 wherein the first end is a start of the segment.

4.   The method of claim 1 wherein the partition compression code word represents a partition command sequence.

5.   The method of claim 4 wherein the representing step (a) further includes the step of:

     (a1)   providing a compound compression code word to represent the partition command sequence and another portion of the segment, the partition command sequence

5   representing the first end of the segment.

1   6.   The method of claim 1 wherein the segment includes an IP packet.

1   7.   The method of claim 1 wherein the segment includes an ATM cell.

1   8.   A method for compressing data for transmission using asynchronous transfer

2   mode (ATM), the data including a plurality of segments, each of the plurality of segments

3   including a first end and a second end, a dictionary being used in compressing the data, the

4   method comprising the steps of:

5   (a)   representing the first end of a segment of the plurality of segments with a

       partition compression code word, the partition compression code word representing a

6   partition command sequence;

7   (b)   adding bytes to a string including the command sequence representing the

8   first end of the segment until the string does not have a match in the dictionary;

9   (c)   adding a code word to the dictionary, the code word including the partition

10   command sequence as a root, the code word representing the string if the string is obtained

11

12   in a first iteration;

13   (d)   utilizing the code word in the dictionary to represent the string if the string is

14   not obtained in the first iteration;

15   (e)   compressing a remainder of the segment, if any.

1   9.   A method for transmitting data using asynchronous transfer mode (ATM), the

2   data including a plurality of segments, each of the plurality of segments including a first end

3   and a second end, a dictionary being used in compressing the data, the method comprising

4   the steps of:

5   (a)   representing the first end of a segment of the plurality of segments with a

6   partition compression code word;

7   (b)   transmitting the partition compression code word; and

8   (c)   compressing a remaining portion of the segment;

9   (d)   transmitting the remaining portion of the segment.

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10.   A method for transmitting data using asynchronous transfer mode (ATM), the

data including a plurality of segments, each of the plurality of segments including a first end

and a second end, the method comprising the steps of:

     (a)   representing the first end of a segment of the plurality of segments with a

transparent mode command;

     (b)   transmitting the transparent mode command; and

     (c)   transmitting a remaining portion of the segment.

1   11.   A system for compressing data for transmission using asynchronous transfer

2   mode (ATM), the data including a plurality of segments, each of the plurality of segments

3   including a first end and a second end, the system comprising:

4   means for representing the first end of a segment of the plurality of segments with a

5   partition compression code word; and

6   means for compressing a remaining portion of the segment.

1 12. The system of claim 11 wherein the first end is a start of the segment.

1 13. The system of claim 11 wherein the partition compression code word

2 represents a partition command sequence.

1 14. The system of claim 13 wherein the representing means further includes

2 means for:

3 providing a compound compression code word to represent the partition command

4 sequence and another portion of the segment, the partition command sequence representing

5 the first end of the segment.

15. The system of claim 11 wherein the segment includes an IP packet.

16. The system of claim 11 wherein the segment includes an ATM cell.

17. A system for compressing data for transmission using asynchronous transfer

2 mode (ATM), the data including a plurality of segments, each of the plurality of segments

3 including a first end and a second end, a dictionary being used in compressing the data, the

4 system comprising:

5 means for representing the first end of a segment of the plurality of segments with a

6 partition compression code word representing a partition command sequence;

7 means for adding bytes to a string including the first end of the segment until the

8 string does not have a match in the dictionary;

9   means for adding a code word to the dictionary, the code word including the partition

10   command sequence as a root, the code word representing the string if the string is obtained

11   in a first iteration;

12   means for utilizing the code word in the dictionary to represent the string if the string

13   is not obtained in the first iteration;

14   means for compressing a remainder of the segment, if any.

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1   18.   A system for transmitting data using asynchronous transfer mode (ATM), the

2   data including a plurality of segments, each of the plurality of segments including a first end

3   and a second end, the system comprising the steps of:

4   means for representing the first end of a segment of the plurality of segments with a

5   transparent mode command;

6   means for transmitting the transparent mode command and a remaining portion of

7   the segment.

1   19.   A computer-readable medium containing a program for compressing data for

2   transmission using asynchronous transfer mode (ATM), the data including a plurality of

3   segments, each of the plurality of segments including a first end and a second end, the

4   program including instructions for:

5   (a)   representing the first end of a segment of the plurality of segments with a

6   partition compression code word;

7   (b)   compressing a remaining portion of the segment.

1   20.   A computer-readable medium containing a program for compressing data for

2   transmission using asynchronous transform mode (ATM), the data including a plurality of

3   segments, each of the plurality of segments including a first end and a second end, a

4   dictionary being used in compressing the data, the program including instructions for:

5   (a)   representing the first end of a segment of the plurality of segments with a

6   partition compression code word, the partition compression code word representing a

7   partition command sequence;

8   (b)   adding bytes to a string including the first end of the segment until the string

9   does not have a match in the dictionary;

10   (c)   adding a code word to the dictionary, the code word including the partition

11   command sequence as a root, the code word representing the string if the string is obtained

12   in a first iteration;

13   (d)   utilizing the code word in the dictionary to represent the string if the string is

14   not obtained in the first iteration;

15   (e)   compressing a remainder of the segment, if any.

1   21.   A computer-readable medium containing a program for transmitting data

2   using asynchronous transfer mode (ATM), the data including a plurality of segments, each of

3   the plurality of segments including a first end and a second end, a dictionary being used in

4   compressing the data, the program including instructions for:

5   (a)   representing the first end of a segment of the plurality of segments with a

6   partition compression code word;

7   (b)   transmitting the partition compression code word;

8   (c)   compressing a remaining portion of the segment; and

9   (d)   transmitting the remaining portion of the segment.

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1   22.   A computer-readable medium containing a program for transmitting data

2   using asynchronous transfer mode (ATM), the data including a plurality of segments, each of

3   the plurality of segments including a first end and a second end, the program including

4   instructions for:

5   (a)   representing the first end of a segment of the plurality of segments with a

               transparent mode command;

7   (b)   transmitting the transparent mode command; and

8   (c)   transmitting a remaining portion of the segment.